

What is claimed is:

1 1. An apparatus comprising:

2 a mirror array to form a projected image comprising pixels; and

3 a circuit to, for each pixel, control the mirror array to selectively combine reflected light
4 from at least two mirrors of the array to regulate an intensity of the pixel.

1 2. The apparatus of claim 1, wherein, for each pixel, the circuit controls the mirror
2 array to selectively tilt said at least two mirrors to reflect light into an optical path that intersects
3 a location of the pixel to regulate the intensity of the pixel.

1 3. The apparatus of claim 2, wherein, for each pixel, the circuit controls the mirror
2 array to cause a greater number of said of at least two mirrors to reflect light into the optical path
3 for a higher intensity level than a number of said of at least two mirrors that reflect light into the
4 optical path for a lower intensity level.

1 4. The apparatus of claim 1, wherein each pixel of the projected image is uniquely
2 associated with at least two mirrors of the array.

1 5. The apparatus of claim 1, wherein each pixel of the projected image is associated
2 with a number of mirrors of the array substantially equal to the number of potential gray levels of
3 the pixel.
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5 6. The apparatus of claim 1, wherein the circuit does not use pulse width modulation
6 to regulate the intensity of each pixel.

1 7. The apparatus of claim 1, wherein a first dimension of the array is associated with
2 pixel positions of the projected image and a different second dimension of the array is associated
3 with intensity values for the pixels.

1 8. The apparatus of claim 1, further comprising:
2 optics to, for each pixel, merge optical paths extending from said at least two mirrors into
3 a single optical path that intersects a location of the pixel.

1 9. The apparatus of claim 8, wherein the optics compresses a two-dimensional image
2 formed from light reflected from the mirror array into a one-dimensional sub-image of the
3 projected image.

1 10. The apparatus of claim 1, wherein, for each pixel, the intensity of the pixel is
2 indicated by a multiple bit digital value and mirrors of the array are organized into different
3 groups, each group of mirrors being associated with a different bit of the digital value.

1 11. A method comprising:
2 using a mirror array to form a projected image, the projected image comprising pixels;
3 and
4 controlling the mirror array to selectively combine reflected light from at least two
5 mirrors of the array to regulate an intensity of each pixel.

1 12. The method of claim 11, further comprising:
2 for each pixel, controlling the mirror array to selectively tilt said at least two mirrors to
3 reflect light into an optical path that intersects a location of the pixel to regulate the intensity of
4 the pixel.

1 13. The method of claim 12, wherein the controlling the mirror array to selectively tilt
2 comprises:

3 for each pixel, controlling the mirror array to cause a greater number of said of at
4 least two mirrors to reflect light into the optical path for a higher intensity level than a number of
5 said of at least two mirrors that reflect light into the optical path for a lower intensity level.

1 14. The method of claim 11, further comprising:
2 uniquely associating each pixel of the projected image with at least two mirrors of the
3 array.

1 15. The method of claim 11, further comprising:
2 associating each pixel of the projected image with a number of mirrors of the array
3 substantially equal to the number of potential gray levels of the pixel.
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5 16. The method of claim 11, wherein the controlling does not include using pulse
6 width modulation to regulate the intensity of each pixel.

1 17. The method of claim 11, further comprising:
2 using a first dimension of the array to identify pixel positions of the projected image; and
3 using a different second dimension of the array to identify intensity values for the pixels.

1 18. The method of claim 11, further comprising:
2 merging optical paths extending from said at least two mirrors into a single optical path
3 that intersects a location of the pixel.

1 19. The method of claim 18, further comprising:
2 compressing a two-dimensional image formed from light reflected from the mirror array
3 into a one-dimensional sub-image of the projected image.

1 20. The method of claim 1, wherein, for each pixel, the intensity of the pixel is
2 indicated by a multiple bit digital value, the method further comprising:
3 organizing mirrors of the array into different groups, each group of mirrors being
4 associated with a different bit of the digital value.

1 21. A projection system comprising:
2 condensing optics;
3 a mirror array; and
4 a circuit to, for each pixel, control the mirror array to selectively direct reflected light
5 from the mirror array into the condensing optics from at least two mirrors of the array to regulate
6 an intensity of the pixel.

1 22. The projection system of claim 21, wherein, for each pixel, the circuit controls the
2 mirror array to selectively tilt said at least two mirrors to reflect light into an optical path that
3 intersects a location of the pixel to regulate the intensity of the pixel.

1 23. The projection system of claim 22, wherein, for each pixel, the circuit controls the
2 mirror array to cause a greater number of said of at least two mirrors to reflect light into the
3 optical path for a higher intensity level than a number of said of at least two mirrors that reflect
4 light into the optical path for a lower intensity level.

1 24. The projection system of claim 21, wherein each pixel of the projected image is
2 uniquely associated with at least two mirrors of the array.

1 25. The projection system of claim 21, wherein each pixel of the projected image is
2 associated with a number of mirrors of the array substantially equal to the number of potential
3 gray levels of the pixel.
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5 26. The projection system of claim 21, wherein the circuit does not use pulse width
6 modulation to regulate the intensity of each pixel.

1 27. The projection system of claim 21, wherein a first dimension of the array is
2 associated with pixel positions of the projected image and a different second dimension of the
3 array is associated with intensity values for the pixels.

1 28. The projection system of claim 21, wherein, for each pixel, the intensity of the
2 pixel is indicated by a multiple bit digital value and mirrors of the array are organized into
3 different groups, each group of mirrors being associated with a different bit of the digital value.

1 29. A projection system comprising:
2 condensing optics;
3 a mirror array;
4 a processor coupled to the mirror array; and
5 a flash memory storing instructions to cause the processor to, for each pixel, control the
6 mirror array to selectively direct reflected light from the mirror array into the condensing optics
7 from at least two mirrors of the array to regulate an intensity of the pixel.

1 30. An article comprising a computer-readable storage medium storing instructions to
2 when executed cause a computer to:

3 control a mirror array to produce a projected image, and
4 for each pixel of the image control the mirror array to selectively direct reflected light
5 from the mirror array in an optical path toward the projected image from at least two mirrors of
6 the array to regulate an intensity of the pixel.

1 31. The article of claim 30, further comprising instructions to cause the processor to
2 control the mirror array to direct the reflected light toward condensing optics.

1 32. The article of claim 30, further comprising instructions to cause the processor to
2 group mirrors of the array into groups of multiple mirrors, each group being associated with a
3 different pixel of the projected image and the mirrors of each group collectively forming a gray
4 scale intensity for the associated pixel.